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(54) **Unit for connecting a seat to a motor vehicle floor.**

(57) The connection unit (1) for the seat (2) comprises guides (3) resting on a frame (7) fixable to the motor vehicle floor, in such a manner as to enable the seat (2) to be supported by said floor and to undergo translational movement relative thereto. Said guides (3) comprise a first portion (4) arranged for fixing to the seat (2) and to translate relative to a second portion (6). This latter is arranged to form a connection with said frame (7) by way of positioning means (8) and locking means (9).

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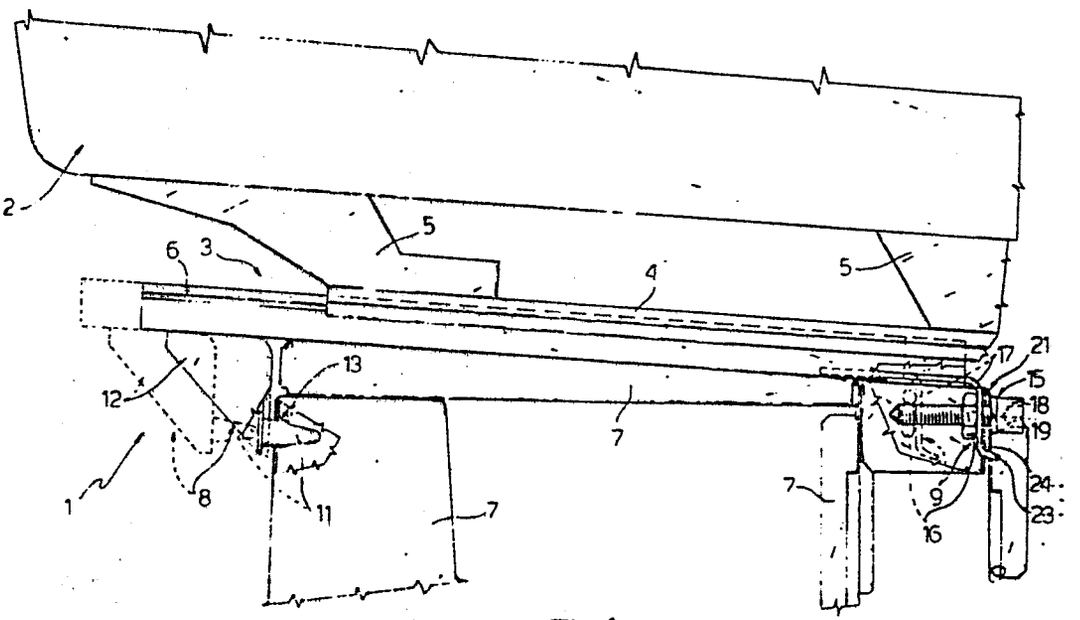


Fig.1

UNIT FOR CONNECTING A SEAT TO A MOTOR VEHICLE FLOOR

This invention relates to a unit for connecting a seat to a motor vehicle floor.

Numerous systems are known for connecting a seat, particularly the front seat, to a motor vehicle floor.

An object of the present invention is to provide a unit for connecting a seat to a motor vehicle floor in such a manner as to allow the seat to undergo translational movement relative to the floor while always obtaining reliable anchoring of the seat to said floor. A further object of the present invention is to provide a connection unit which simplifies the mounting operations so that these latter can also be effected by automatic machines.

Said object is attained according to the present invention by a unit for connecting a seat to a motor vehicle floor, characterised by comprising guide means resting on a frame fixable to the floor, in such a manner as to enable said seat to be supported by said floor and undergo translational movement relative thereto; said guide means comprising at least one first portion and at least one second portion; said first portion being arranged for fixing to said seat and to translate relative to said second portion; said second portion being arranged to form a connection with said frame by way of positioning means and locking means.

The present invention will be more apparent from the description of a preferred embodiment thereof given by way of non-limiting example hereinafter with reference to the accompanying drawings, in which:

Figure 1 is an elevational view of a first embodiment of a connection

unit constructed in accordance with the present invention;

Figure 2 is a side elevational view of a detail of Figure 1;

Figure 3 is a partly sectional elevational view of a second embodiment of a connection unit constructed in accordance with the present invention; and

Figure 4 is a side elevational view of a detail of Figure 3.

In Figures 1 and 2, the reference numeral 1 indicates overall a unit for connecting a seat 2, particularly a front seat, to a motor vehicle floor (not shown). The connection unit 1 comprises essentially guide means 3 having a first portion 4 which supports the seat 2 by means of brackets 5, and a second portion 6 which rests on a frame 7 and is connected to this latter by way of positioning means 8 and locking means 9 respectively.

The guide means 3, of essentially known type, are respectively constituted by two section bars of C configuration (portion 4) and U configuration (portion 6) respectively.

The positioning means 8 are essentially constituted by a pin 11 in the form of a cone with a rounded point, which is supported at its base by a suitable bracket 12 fixed, for example welded, to that end of the portion 6 positioned at the front end of the seat 2. When in use, the pin 11 engages a corresponding seating 13 provided by the frame 7.

The locking means 9 are essentially constituted by a screw 15 premounted by means of its own nut 16 on a bracket 17 which is fixed, for example welded, to that portion 6 of the guide means 3 at the opposite end to that carrying the bracket 12. More particularly, the screw 15 comprises a head 18 with a hexagonal seat 19 for screwing

purposes, and a shank 20 which when in use engages a corresponding slot 21 provided in the frame 7. Finally, the bracket 17, essentially of L configuration, comprises an outwardly bent end lug 23 which engages a corresponding seating 24 provided in the frame 7 at that end thereof disposed below said slot 21.

In Figures 3 and 4, the unit for connecting the seat 2 to said motor vehicle floor is indicated overall by the reference numeral 30. As the constituent elements of said unit are essentially those which constitute the aforesaid connection unit 1, the same reference numerals are used, followed in each case by the letter a.

On comparing the connection units 1 and 30, some structural differences can however be seen. Firstly, the pins 11 and 11a are orientated in diametrically opposite directions, and in Figure 3 the shank 20a of the screw 15a engages a through hole 21a which constitutes the equivalent of the slot 21 of Figure 1. Finally, the end lug 23a of the bracket 17a now engages a through slot 24a constituting an equivalent means to the said open seating 24 shown in Figures 1 and 2.

The connection unit 1 or 30 is generally firstly fixed to the seat 2 before this latter is connected to said motor vehicle floor.

With reference to Figures 1 and 2, the seat 2 is connected by initially resting the connection unit 1 on the frame 7 so that the positioning means 8 and locking means 9 assume the positions indicated by dashed lines. The seat 2 is then slid from left to right, resulting in the engagement of the seating 13 of the frame 7 by the pin 8 and the engagement of the seating 24 of the frame 7 by the lug 23. The screw 15 then only has to be screwed down in order to securely and safely lock the guide means 3 to the frame 7 and thus the seat 2 to said

floor.

An analogous procedure is followed in the case of the connection unit 30. In this case, the guide means 3a are rested on the frame 7a and are then slid from right to left until the pin 11a engages the seating 13a and the lug 23a correspondingly engages the slot 24a. The screw 15a is then screwed down in order to securely and safely lock the seat 2 to said floor.

An examination of the characteristics of the connection units 1 and 30 constructed in accordance with the present invention underlines the advantages which they provide. In this respect, both enable the mounting operations to be effected rapidly and simply, and in a totally automatic manner. The precise and safe connection which they provide is also contributed to by the lugs 23 and 23a which, in the case of collision, prevent the guide means 3, 3a tilting in an anti-clockwise direction (Figures 1 and 3). Finally, it is apparent that modifications can be made to the described connection units 1 and 30, but without leaving the scope of the present invention.

PATENT CLAIMS

1. A unit (1, 30) for connecting a seat (2) to a motor vehicle floor, characterised by comprising guide means (3, 3a) resting on a frame (7, 7a) fixable to the floor, in such a manner as to enable said seat (2) to be supported by said floor and undergo translational movement relative thereto; said guide means (3, 3a) comprising at least one first portion (4, 4a) and at least one second portion (6, 6a); said first portion (4, 4a) being arranged for fixing to said seat (2) and to translate relative to said second portion (6, 6a); said second portion (6, 6a) being arranged to form a connection with said frame (7, 7a) by way of positioning means (8, 8a) and locking means (9, 9a).

2. A unit as claimed in claim 1, characterised in that said positioning means (8, 8a) and said locking means (9, 9a) are fixed to said second portion (6, 6a) of said guide means (3, 3a), and cooperate with respective seatings (13, 13a and 21, 21a) provided in said frame (7, 7a).

3. A unit as claimed in claim 1 or 2, characterised in that said positioning means (8, 8a) are connected to said guide means (3, 3a) in a position corresponding with the front end of said seat (2), and said locking means (9, 9a) are connected to said guide means (3, 3a) in a position corresponding with a rear portion of said seat (2).

4. A unit as claimed in any one of the preceding claims, characterised in that said positioning means (8, 8a) comprise essentially a pin (11, 11a) carried by a bracket (12, 12a) fixed to said guide means (3, 3a).

5. A unit as claimed in claim 4, characterised in that said pin (11, 11a) has an essentially conical structure.

6. A unit as claimed in any one of the preceding claims, characterised in that said locking means (9) comprise essentially a screw (15) and a nut (16) which are premounted on a respective bracket (17) and are arranged to engage a corresponding open seating (18) provided in said frame (7).

7. A unit as claimed in any one of claims 1 to 6, characterised in that said locking means (9a) comprise essentially a screw (15a) carried by a bracket (17a) and arranged to engage a through hole (21a) provided in said frame (7a).

8. A unit as claimed in claim 6 or 7, characterised in that said bracket (17, 17a) comprises a bent end lug arranged to engage, when in use, a corresponding seating (24, 24a) provided in said frame in order to prevent the uncoupling of said locking means as the result of a rotational force.

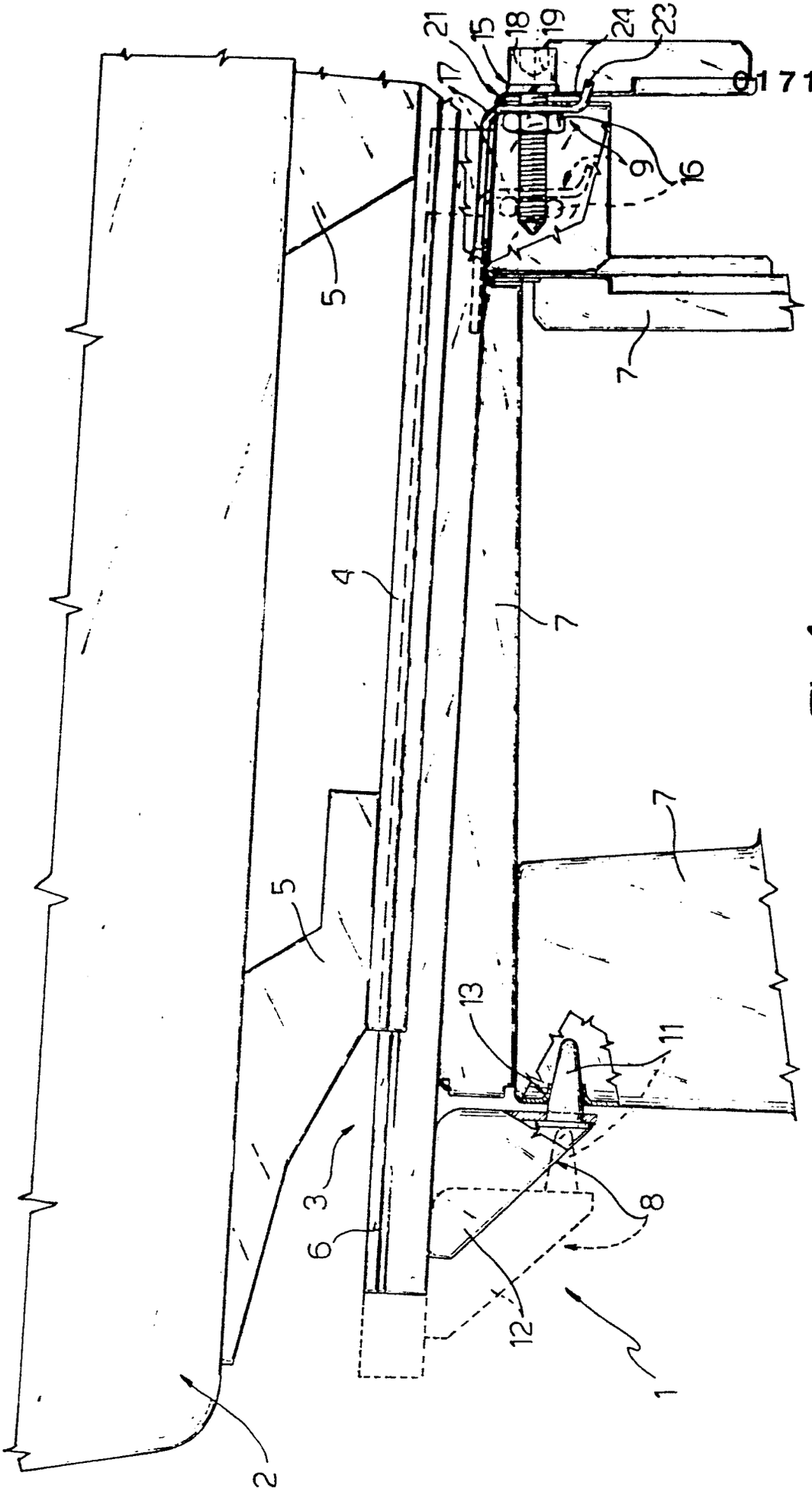


Fig.1

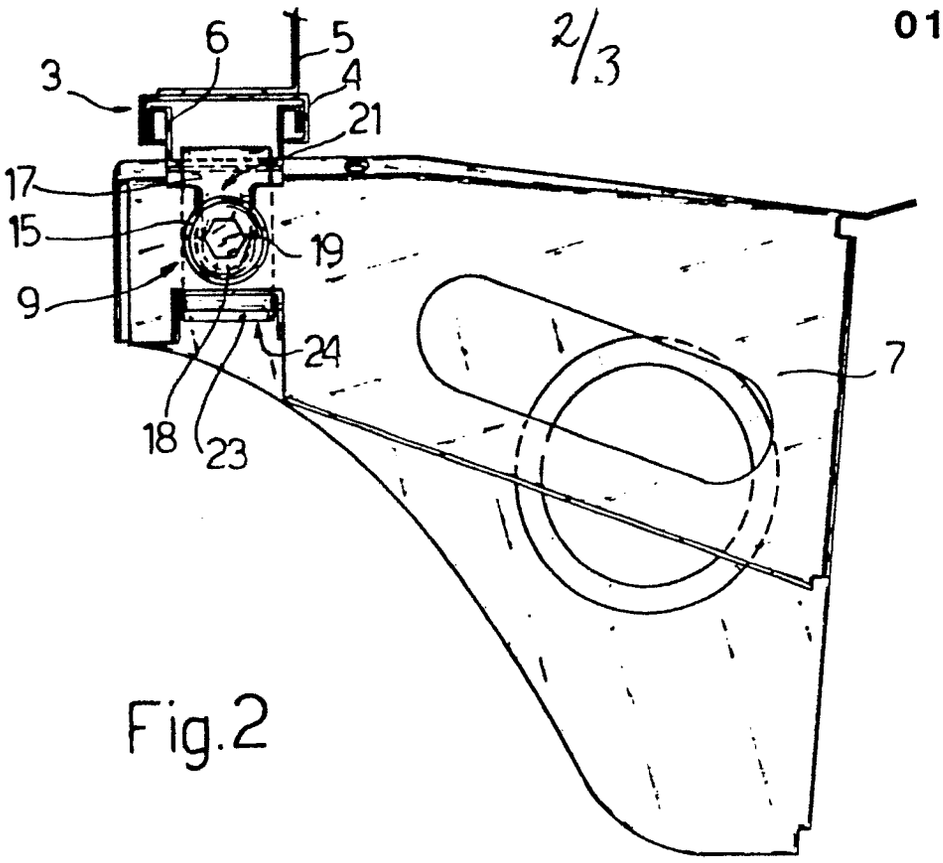

6
5
3
4
21
17
15
19
9
24
7
18
23

Fig.2

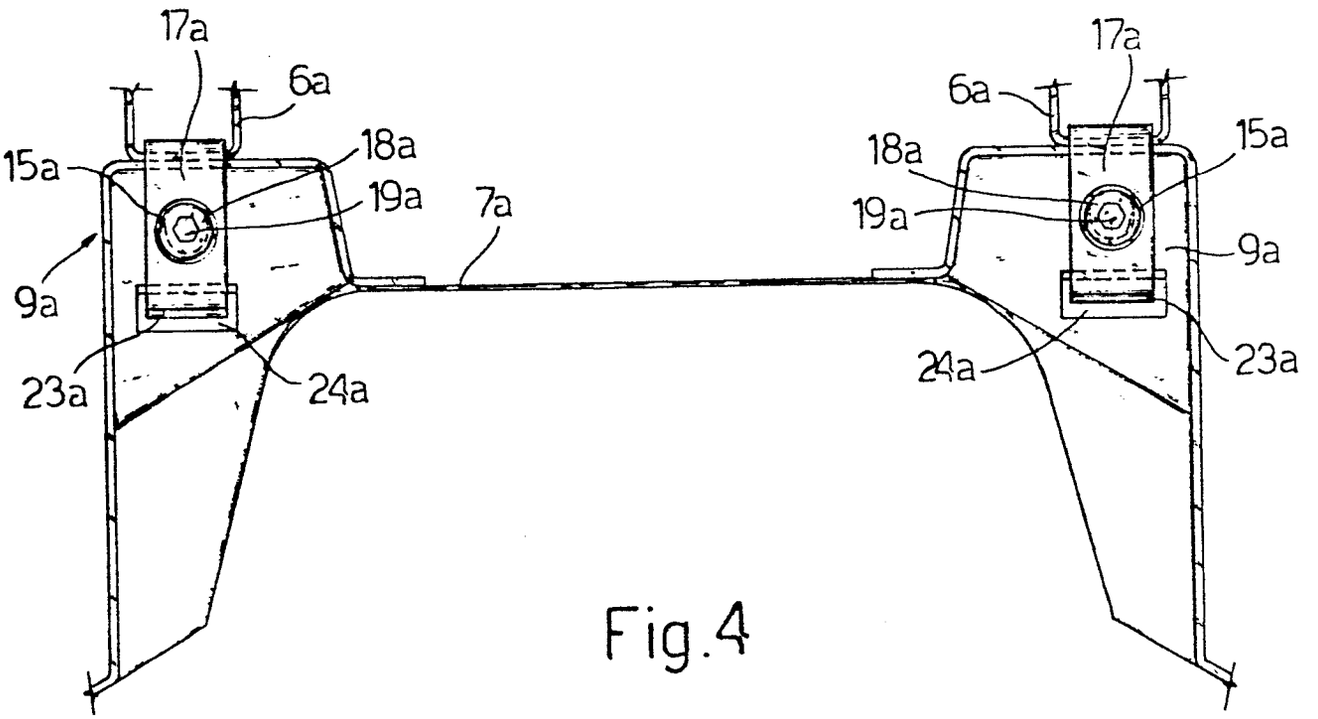

17a
6a
15a
18a
19a
7a
9a
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24a
17a
6a
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23a

Fig.4

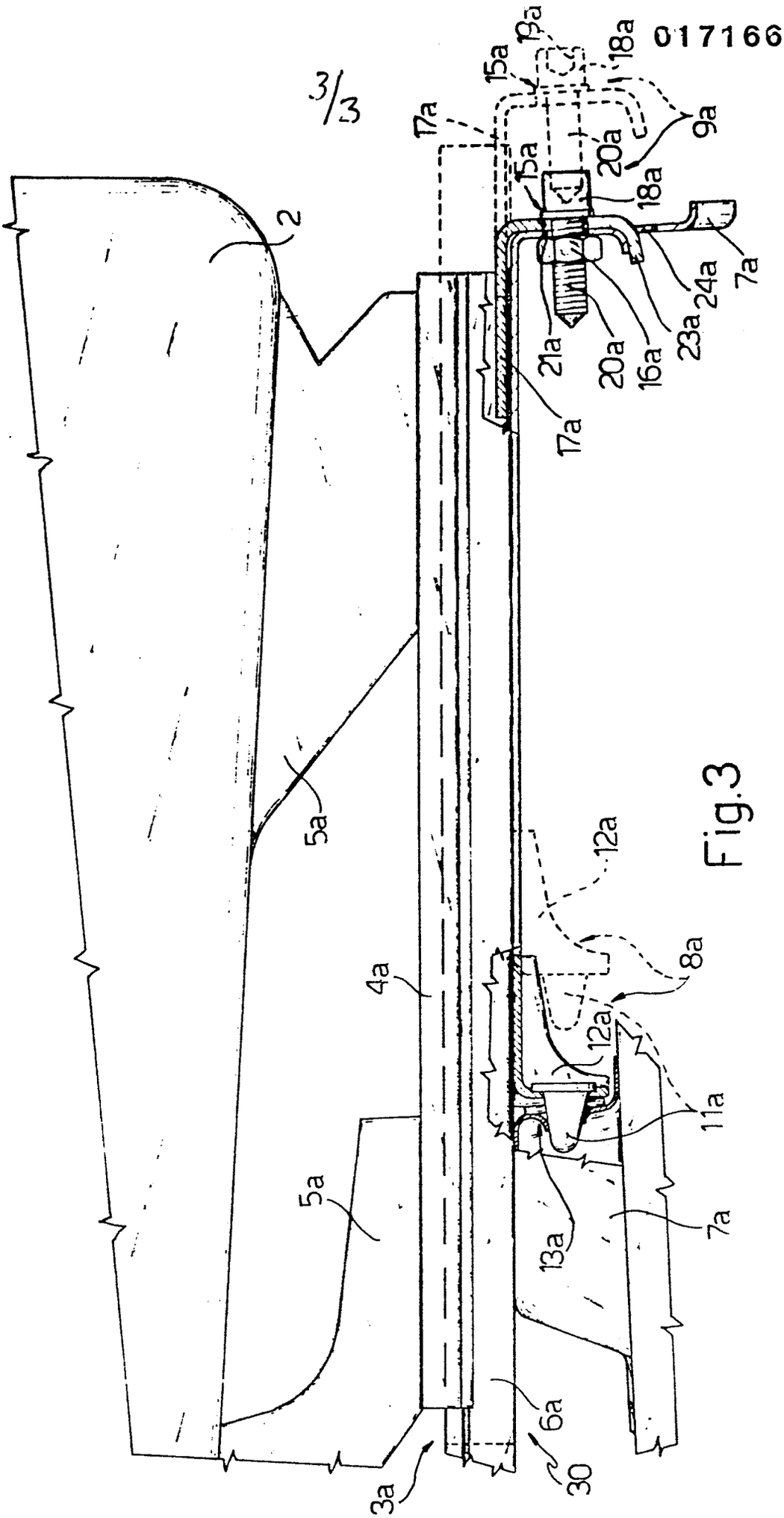

2
5a
4a
5a
3a
6a
30
13a
7a
11a
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8a
12a
17a
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13a
18a
9a
17a
15a
20a
18a
21a
20a
16a
23a
24a
7a

Fig.3

0171660

European Patent Office

EUROPEAN SEARCH REPORT

Application number
EP 85 10 9164

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl 4)
X	FR-A- 799 003 (COX) * Page 1, line 46 - page 2, line 29; figures *	1,2,4	B 60 N 1/08
X	US-A-2 951 527 (WASSILIEFF) * Column 2, lines 3-57; figures *	1	
A	WO-A-8 204 228 (NISSAN)		
A	GB-A-2 113 538 (NISSAN)		
A	GB-A-2 110 927 (NISSAN)		
A	FR-A-2 453 750 (FORD)		TECHNICAL FIELDS SEARCHED (Int. Cl 4) B 60 N 1/00 B 61 D 33/00 B 63 B 29/00 B 64 D 11/00
A	FR-A-2 220 022 (COACH)		
A	US-A-3 899 151 (KOBREHEL)		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18-11-1985	HORVATH R.C.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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